

MASON CITY COAL GAS

(Mason City, Iowa)

GENERAL DESCRIPTION

The Mason City Coal Gas site is 1.2 acres situated adjacent to Willow Creek in the NW 1/4 of the SW 1/4 of Section 10, T96N, R20W, Mason City, Iowa and is owned by Interstate Power Company and the city of Mason City. The site was entered on the Registry in February 1990. The EPA proposed the site for the National Priorities List in 1992.

SITE CLASSIFICATION

In 2001, the priority classification for this site has been revised to “d”, Site Properly Closed, Requires Continued Management.

TYPE AND QUANTITY OF HAZARDOUS WASTE

Prior to 1951, a coal gasification plant was operated on the site. During plant operations, coal tar sludges and other wastes were generated as part of the coal gasification process. When plant operations were discontinued and the plant was dismantled, coal tar wastes were left in place or deposited in underground structures.

In 1984, three subsurface structures containing oily sludges were found during construction of a sanitary sewer for the city of Mason City. The structures have been excavated and all visible oily sludges removed and stored on-site. Significant quantities of wastes are still present at the site, contaminating the soil and groundwater.

Interstate Power Company contracted a field investigation of the site from 1986 to 1988. Groundwater samples collected from monitoring wells at the site showed the presence of several hazardous substances. Contaminants found at elevated concentrations include benzene (4300 ug/l), toluene (1100 ug/l), xylenes (1400 ug/l), ethylbenzene (3000 ug/l), and 1,2-dichloroethane (55 ug/l). Cyanide and 10 polynuclear aromatic hydrocarbons (PAHs) typically associated with coal tar wastes were identified in both the soil and groundwater at the site. The PAHs exhibiting the highest concentrations in the groundwater are naphthalene (9400 ug/l), acenaphthylene (2040 ug/l), pyrene (1100 ug/l) and fluoranthene (620 ug/l).

SUMMARY OF PUBLIC HEALTH AND ENVIRONMENTAL CONCERNS

The site is within the city limits of Mason City, Iowa. The city obtains its water from deep municipal wells located north and southeast of the site. Willow Creek acts as the northern boundary of the site and flows in an easterly direction. It discharges into the Winnebago River approximately 1 1/4 miles downstream of the site.

SUMMARY OF ASSESSMENT, MONITORING OR REMEDIAL ACTIONS

The EPA is the lead agency at the site. On January 29, 1992, the EPA approved an Administrative Order on Consent for a Remedial Investigation/Feasibility Study (RI/FS) at the site. In 1993, the EPA approved the RI report. The Interim Baseline Risk Assessment was presented by EPA in September 1993. EPA approved a source removal plan in 1995. The removal action was completed in September 1996.

The contaminated soils at the site and under the adjacent Delaware Avenue were excavated to the bedrock. The soils were treated by Thermal De-sorption and replaced as fill. EPA has issued a Record of Decision (ROD) for remedial action, which entails the initiation of a natural attenuation program for ground water. Groundwater monitoring is ongoing.

2008: EPA has completed the first ‘Five Year Review’ for the site and found no significant deficiencies. The RP will continue to monitor natural attenuation groundwater parameters.

